ATTORNEY DOCKET NO. 21108.0021U2
PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	)	
	)	
Wang Min, et al.	)	Art Unit: 1652
	)	
Application No. 10/523,343	)	Examiner: Pak, Yong D.
	)	
Int. Filing Date: July 22, 2003	)	Confirmation No. 5753
	)	
For: THIOREDOXIN MUTANTS AND USES THEREOF	)	
	)	

RESPONSE TO RESTRICTION REQUIREMENT

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

NEEDLE & ROSENBERG, P.C.
Customer Number 23859

Sir:

This is in response to the Office Action dated August 9, 2007, wherein restriction of the claims of the above-identified application is required. A Request for Extension of time is included herewith.

The Office Action requires restriction to one of the following twelve groups of claims:

Group I: Claims 1-19, drawn to a mutant thioredoxin which is resistant to oxidizing effects of cytokines, reactive oxygen species or S-nitrosylation of SH group by nitrous oxide;

Group II: Claims 11-14 and 17 (in part), drawn to a method of decreasing inflammation by using the thioredoxin of Group I;

Group III: Claims 15 and 17 (in part), drawn to a method of decreasing apoptosis by using the thioredoxin of Group I;

Group IV: Claims 16 and 17 (in part), drawn to a method of decreasing insulin resistance by using the thioredoxin of Group I;

Group V: Claims 18-22, drawn to a method of treating atherosclerosis using the thioredoxin of Group I;

Group VI: Claims 23-28, drawn to a method of treating a subject with diabetes using the thioredoxin of Group I;

Group VII: Claims 29-34, drawn to a method of treating a subject with an apoptotic disease using the thioredoxin of Group I;

Group VIII: Claims 35-40, drawn to a method of treating a subject with cardiac dysfunction using the thioredoxin of Group I;

Group IX: Claims 41-48, drawn to a method of treating a subject with an angiogenesis-dependent disease using the thioredoxin of Group I;

Group X: Claims 49-53, drawn to a method of treating a diagnosing a subject with an angiogenesis-dependent disease using the thioredoxin of Group I;

Group XI: Claims 54-59, drawn to a method of screening a subject for a genetic risk of an angiogenesis dependent disease using the thioredoxin of Group I;

Group XII: Claims 60-64, drawn to a method of treating a subject with diabetes using the thioredoxin of Group I;

As required in response to the Restriction Requirement, Applicants provisionally elect Group I (claims 1-10) with traverse.

37 C.F.R. § 1.475 provides that national stage applications shall relate to one invention or to a group of inventions so linked as to form a single general inventive concept. Such inventions possess unity of invention. The Office Action proposes that the groups of inventions are not so linked as to form a single general inventive concept under PCT Rule 13.1 because, under PCT

Rule 13.2 they allegedly lack the same or corresponding special technical features. PCT Rule 13.2 states:

> ... the requirement of unity of invention referred to in Rule 13.1 shall be fulfilled only when there is a technical relationship among those inventions involving one or more of the same or corresponding special technical features. The expression "special technical features" shall mean those technical features that define a contribution which each of the claimed inventions, considered as a whole, makes over the prior art.

The Office Action indicates that the technical feature linking Groups I-XII appears to be that they all relate to a mutant thioredoxin which is resistant to oxixizing effects of cytokines, reactive oxygen species of S-nitrosylation of a SH group by nitrous oxide. The Office Action then points to Bishopric et al. (Circ. Res. 2002; 90:1237-39) as evidence that this thioredoxin mutant was known and therefore allegedly part of the prior art. In response, Applicants respectfully direct the Examiner to the first sentence of the second paragraph of Bishopric et al., which indicates that the article is a review of another article in the same issue (Liu and Min, Circ. Res. 2002; 90:1259-66), which is authored by the inventors listed in the instant application. Thus, the disclosure of mutant thioredoxins in Bishopric et al. is clearly indicated to be the inventors' own work. As such, it is not prior art under 35 U.S.C. § 102(a) and should therefore not be used to reject the special technical feature. Applicants therefore respectfully request the withdrawal of the restriction requirement, or in the alternative, request rejoinder upon the future, effective removal of this reference.

Applicants also traverse the restriction requirement as currently set forth for the following reasons. To be valid, a restriction requirement must establish both that (1) the "inventions" are either independent or distinct, and (2) that examination of more than one of the "inventions"

would constitute a burden to the Examiner. Applicants note that the restriction requirement does not provide sufficient basis to indicate that examination of more than one of the "inventions" would overly burden the Examiner. Accordingly, for this additional reason, there is no basis for maintaining the restriction requirement.

Favorable consideration of claims 1-64 is earnestly solicited.

A Credit Card Payment authorizing payment in the amount of $525.00, representing the fee for a small entity under 37 C.F.R. § 1.17(a)(3) for a Three Month Extension of Time, and a Request for Extension of Time are hereby enclosed. This amount is believed to be correct; however, the Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. 14-0629.

Respectfully submitted,

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